

Message

From: Tim Bodell [TBodell@hopi.nsn.us]
Sent: 4/10/2017 7:38:15 PM
To: DeCoteau, Jesse (IHS/PHX) [Jesse.Decoteau@ihs.gov]; Carter, James (IHS/PHX) [James.Carter2@ihs.gov]
CC: lpuhuyesva@hopi.nsn.us; Rapicavoli, Emmanuelle [Rapicavoli.Emmanuelle@epa.gov]
Subject: RE: Hopi Arsenic Program Implementation Work Plan
Attachments: harschbarger .pdf; Halpenny 1951.pdf; Hopi Arsenic Mitigation Work Plan.docx; HAMWP.xlsx

Good morning Jesse,

And thank you for the early HAMP supporting documents.

The NAU Arsenic Treatment Report final recommendations are:

- "More batch testing to conduct Freundlich Isotherms and rapid small scale (bench scale) column tests are required to develop the most appropriate treatment train". -Page 9, Paragraph 5.

- "Possible sources of contaminants include ...wells that were drilled without correct well sealant and leakage from the D Aquifer". - Page 12, Paragraph 2.

These recommendations are identical to the Hopi Public Utility Authority revised scope of work proposed in our email and call last month, with one exception. I can assure IHS that the well seal defect applies to new wells not old wells. Halpenny and Harshbarger perfected pressure grouting of deep artesian aquifers on BIA Wells in the Colorado Plateau. Their boss in Albuquerque C.V. "Hard Nose" Theis insisted. (attachments)

The Kennedy-Jenks report also notes ineffective sealed annuli conditions but fails to provide an effective well design and grouting specification to prevent annulus leakage in deep confined aquifer conditions for the proposed Turquoise Trail Wells. -Page 42, Paragraph 3.

The John Shomaker report verifies defective sealing of the Turquoise Trail well #3 annulus. Page 29, Paragraph 1.

Recent correspondence with Dr. Schlinger and Hydrologist Sharon Lopez confirm the defective grout sealing of the Keams High School and recent Shungopovi Wells. Correspondence with Chris Wolf of DBSA verifies the defective grout seal at Mishongovi attempt.

We strongly concur with IHS Scope of Work E73 requirement to determine the source of arsenic preceding planning and design activities. The NAU Report and other IHS consultant produced documents indicate the source of nitrates is not known, yet they strongly suspect ineffective grout seals. Hopi's Arsenic Technical Task Force including Margot Truini (USGS Principal Investigator), Jim Duffield (HDWR Hydrogeologist) and Chris Wolf (DBSA Geochemist) also verify the groundwater source of arsenic is still unknown. Under these conditions does IHS concur with a proposed scope of work to determine the source of arsenic in Hopi wells ?

HPUA and Hopi's Arsenic Technical Task Force have composed a scope of work that will complete the unfinished arsenic source location tasks of PH-E73, resolve anticipated HAMP PER USDA review questions and assist the villages to comply with recent US EPA Enforcement Finding of Violations. As per Tribal Council time certain April 4, Hopi Water Resources Department and Hopi Public Utility Authority are directed to work closely with IHS to expedite the proposed scope of work. HDWR attempted to organize a meeting with IHS Phoenix Area Engineer without final response.

The tribal financial management conditions of Project Number PH12-E73 assign the Hopi Tribe responsibility for scoping, negotiating and contracting with A&E consultants to perform this work. If the scope of work meets with IHS approval please process these funds from USEPA/IHS intergovernmental agreement.

Let's get together with the IHS team to discuss and advance this work ASAP.

Thanks.

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From: DeCoteau, Jesse (IHS/PHX) [mailto:Jesse.Decoteau@ihs.gov]
Sent: Friday, April 07, 2017 2:24 PM
To: Carter, James (IHS/PHX)
Cc: Tim Bodell
Subject: HAMP Arsenic Water Sampling Results

Afternoon James,

Please find the attached early era HAMP documents. The “Under project PH 06-D33, data was collected throughout the region and analyzed. After quantifying the presence and extent of the occurrence of arsenic in the region, IHS compiled a summary of the findings and disseminated information to the Tribe and EPA through multiple presentations” in the project summary to PH 12-E73 I believe is referencing presentations associated with that gathering effort. Said arsenic concentrations are best summarized in the PER Tables 5.1, 6.1, and 6.3.

The effort also culminated in a Feasibility Study (file too large to attach). The Feasibility Study concentrated on Shungopavi, Sipaulovi, and Mishongnovi and was submitted to EPA for a SDWA Application. The EPA denied funding to the application because no homes would be served.

Thanks,

Jesse

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